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Notice of Allowability

Application No.

10/616,842

Examiner

Juan C. Ochoa

Applicant(s)

CAO, LIPENG

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 8/22/07.
2. ☒ The allowed claim(s) is/are 1-10, 12-15 and 31-44.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

1. The amendment filed 8/22/07 has been received and considered. Claims 1–10, 12–15 and 31–44 are pending in this application, claims 11, 16–30 have been cancelled. Claims 1–10, 12–15 and 31–44 are presented for examination.

Examiner's Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

3. Authorization for this examiner's amendment was given in a telephone interview with David G. Dolezal on 9/17/07.

4. The application has been amended as follows:

5. Claim 31 line 9, immediately after the term "deriving a", the following has been inserted -- power --.

6. Claim 33 line 2, immediately after the term "deriving a", the following has been inserted -- power --.

Allowable Subject Matter

7. Claims 1–10, 12–15 and 31–44 are allowed.

8. The following is a statement of reasons for the indication of allowable subject matter:

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9. While Uchino discloses a method of deriving a power transfer function (see col. 3, lines 38–41) of a circuit,

Macii minimizes the time required to perform simulation-based power estimation by reducing the length of the input trace to be fed to the simulator (see page 417, col. 1, lines 1–3),

Welch outlines a method for the application of the fast Fourier transform algorithm to the estimation of power spectra, which involves sectioning the record, taking modified periodograms of these sections, and averaging these modified periodograms (see page 70, col. 1, Introduction, lines 1–6),

and Joseph discloses deducing the actual runtime power dissipated by different processor units on a CPU chip (see page 135, col. 1, 2nd paragraph, lines 1–4), none of these references taken either alone or in combination disclose the following limitations specifically including:

claim 1 "deriving a second power transfer function for providing an estimate of power consumption of the second circuit responsive to signals applied to the plurality of inputs of the second circuit, wherein the second power transfer function includes a portion for each group of the groups of the second circuit",

claim 5 "clustering in multi-dimensional space having a dimension for each test",

claim 6 "determining an accuracy of the transfer function and changing the coefficients to improve the accuracy of the power transfer function",

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claim 7 "deriving, for each group of at least one input, an impulse response function between the signals and the power consumption; deriving a model for each group from the impulse response function derived for that group",

claim 13 "deriving a second power transfer function for providing an estimate of power consumption for a second circuit, wherein the second circuit is a circuit of the integrated circuit and has a plurality of inputs",

and claim 31 "deriving at least one power impulse function from the information",

in combination with the remaining elements and features of the claimed invention. Also, there is no motivation to combine none of the references to meet these limitations. It is for these reasons that applicant's invention defines over the prior art of record.

10. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Response to Arguments

11. Applicant's arguments filed 8/22/07 have been fully considered.

12. Regarding the rejections under 103, the amendment circumvented all rejections and the rejections are withdrawn.

Conclusion

13. Examiner would like to point out that any reference to specific figures, columns and lines should not be considered limiting in any way, the entire reference is considered to provide disclosure relating to the claimed invention.

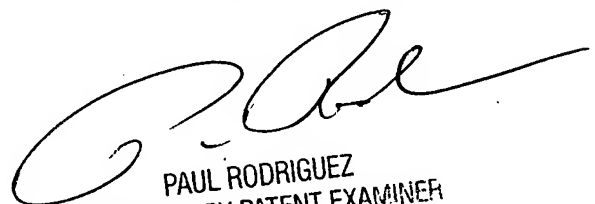
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14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan C. Ochoa whose telephone number is (571) 272-2625. The examiner can normally be reached on 7:30AM - 4:00 PM.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached on (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP 9/18/07


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